

	12	197	27.3	145	12	AAR15106	hgG/bHl chimera,
	13	183.5	25.4	131	19	AAW47027	eCG hormone beta-s
	14	183.5	25.4	134	19	AAW47025	eCG hormone beta-s
	15	183.5	25.4	137	19	AAW47026	eCG hormone beta-s
	16	183.5	25.4	139	19	AAW47024	eCG hormone beta-s
	17	183.5	25.4	169	19	AAW65110	Equine chorionic g
	18	183.5	25.4	169	19	AAW65110	Equine chorionic g
	19	183.5	25.4	169	19	AAW33777	Equine chorionic g
	20	183.5	25.4	169	19	AAW33773	Equine chorionic g
	21	183.5	25.4	169	19	AAW71788	Equine chorionic g
	22	183.5	25.4	169	19	AAW65111	Equine chorionic g
	23	180	24.9	149	14	AAR31001	Rat luteinising ho
	24	178	24.7	141	22	AAW71793	HFSH/MCG beta subu
	25	178	24.7	203	22	AAV43301	Human FSH-beta subu
	26	176	24.4	111	22	AAW52042	Glycoprotein hormo
	27	176	24.4	137	20	AAW99527	Pig lutropin beta-
	28	174	24.1	141	22	AAW71790	Dog luteal beta-
	29	173	24.0	142	15	AAW54674	Beta subunit of a
	30	172.5	23.9	138	22	AAW71791	Amnio acid sequenc
	31	172	23.8	111	21	AAW19348	Human FSH-beta sub
	32	172	23.8	111	21	AAW54159	Sequence of dog be
	33	172	23.8	111	22	AAW52041	Glycoprotein hormo
	34	171.5	23.8	139	7	AAW60601	Glycoprotein hormo
	35	171	23.7	129	20	AAW99503	Glycoprotein hormo
	36	171	23.7	129	20	AAW99496	Glycoprotein hormo
	37	170	23.5	104	22	AAU04625	Human follicle sti
	38	170	23.5	104	22	AAE04497	Human follicle sti
	39	170	23.5	108	22	AAU04624	Human follicle sti
	40	170	23.5	108	22	AAU04496	Human follicle sti
	41	170	23.5	111	22	AAW52020	Human FSH-beta sub
	42	170	23.5	111	22	AAU04623	Human follicle sti
	43	170	23.5	111	22	AAE04495	Human follicle sti
	44	170	23.5	129	20	AAW99546	hFHS-heta analogue
	45	170	23.5	129	20	AAW99497	Glycoprotein hormo

ALIGNMENTS

```

RESULT 1
AAE09440
AAE09440 standard; Protein; 130 AA.
XX
AC AAE09440;
XX
DT 19-NOV-2001 (first entry)
DE
DE Human sbghcTA protein.
XX
XX Human; Alzheimer's disease; amyotrophic lateral sclerosis;
RW ALS; Zollinger-Ellison syndrome; immune system disease; schizophrenia;
RW inflammation; haematopoietic disease; anxiety; feeding disorder; aging;
RW anorexia; depression; cardiovascular disease; sleep disorder; seizure;
RW memory alteration; migraine; stroke; asthma; neuropathy; hypoglycaemia;
RW sexual disorder; growth abnormality; infection; autoimmune disease;
RW rheumatoid arthritis; cataractogenesis; angiogenesis; atherosclerosis;
RW cerebral ischaemia; cirrhosis; Huntington's disease; Hodgson's disease;
RW hypercholesterolaemia; headache; amnesia; cardiac arrhythmia; obesity;
RW diabetes mellitus; glomerulonephritis; renovascular hypertension;
RW cancer; vaccine; gene therapy; sbghcTA gene.
XX
XX Homo sapiens.
XX OS
XX PN WO200160850-A1.
XX
XX 23-AUG-2001.
XX
XX 14-FEB-2001; 2001WO-US04703.
XX
XX 14-FEB-2000; 2000US-0182172.
XX 29-FEB-2000; 2000US-0186084.
XX 18-APR-2000; 2000US-0196583.
XX 04-OCT-2000; 2000US-0237963.
XX

```

XX (SMIK ) SMITHKLINE BEECHAM CORP.  
 PA (SMIK ) SMITHKLINE BEECHAM PLC.  
 XX  
 PI Agarwal P, Kabnick KS, Murdoch PR, Rizvi SK, Smith RF, Xiang Z;  
 XX WPI, 2001-536566/59.  
 DR N-PSDB; AAD16347.  
 XX  
 PT New secreted and membrane associated polypeptides for treating  
 PT Alzheimer's disease, psoriasis, cancer, enterocolitis, sleep and sexual  
 PT disorders, stroke, and asthma -  
 PT  
 PS Claim 1: Page 58-59; 94pp; English.  
 XX  
 CC The present sequence is a human sbpHc7a protein,  
 CC a secreted protein of the invention.  
 CC The invention relates to secreted and membrane associated polypeptides  
 CC and nucleic acid molecules encoding such polypeptides. Sequences of the  
 CC invention are useful for treating diseases such as Alzheimer's disease,  
 CC amyotrophic lateral sclerosis (ALS), Zollinger-Ellison syndrome, diseases  
 CC of the immune system, haematopoietic disease, inflammation, anxiety,  
 CC schizophrenia, feeding disorders, anorexia, depression, social, sexual  
 CC and rewarded behaviour, cardiovascular disease, sleep disorder, learning  
 CC and memory alteration and altered immune response, seizure, migraine,  
 CC cancer, stroke, asthma, neuropathy, aging, sexual disorders, treatment  
 CC of transsexuals, growth abnormalities, obesity, infections, autoimmune  
 CC diseases (e.g. rheumatoid arthritis), cataractogenesis, angiogenesis,  
 CC disorders associated with healthy maintenance of gastric mucosa and  
 CC repair of acute and chronic mucosal lesion, lung carcinoma, cerebral  
 CC ischemia, atherosclerosis, cirrhosis, Huntington's disease, headache,  
 CC amnesia, multiple sclerosis, Hodgson's disease, dilated cardiomyopathy,  
 CC congestive heart failure, cardiac arrhythmias, hypercholesterolaemia,  
 CC viral and non-viral hepatitis, type I and type II diabetes mellitus,  
 CC glomerulonephritis, renovascular hypertension, hypoglycaemia, periodic  
 CC paralyseis, tendinitis and malignant hyperthermia. Polypeptides of the  
 CC invention are used to identify membrane bound and soluble receptors.  
 CC They are also useful as vaccines for inducing an immunological response  
 CC in a mammal. Polynucleotides of the invention are used in gene therapy.  
 CC They are also valuable for chromosome localisation studies and tissue  
 CC expression studies.  
 CC  
 SO Sequence 130 AA:  
 XX  
 XX  
 Query Match 100.0%; Score 722; DB 22; Length 130;  
 Best Local Similarity 100.0%; Pred. No. 9,1e-70;  
 Matches 130; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 MKLAFLFGPMALLLAGYGCVLGASSGNLRTFVGCAVREFTFLAKKPGCGRLRTTDC 60  
 DB 1 MKLAFLFGPMALLLAGYGCVLGASSGNLRTFVGCAVREFTFLAKKPGCGRLRTTDC 60  
 OY 61 WGRCEWKEKPILEPPYTEAHHRVCTYNETKQVTKLPNCAPGVDPFTYTPVAIRCDGAC 120  
 DB 61 WGRCEWKEKPILEPPYTEAHHRVCTYNETKQVTKLPNCAPGVDPFTYTPVAIRCDGAC 120  
 OY 121 STATTECETI 130  
 DB 121 STATTECETI 130  
 DE 01-OCT-2001 (first entry)  
 XX Amino acid sequence of a human cystine knot polypeptide.  
 DE Cystine knot polypeptide: follicular arrest; recruitment modulator;  
 KM fertility-related disorder; contraception; menopause; contraceptive;

KM follicle growth.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO200153346-A1.  
 XX  
 PD 26-JUL-2001.  
 XX  
 PF 17-JAN-2001; 2001MO-EP00570.  
 XX  
 PR 18-JAN-2000; 2000EP-0200185.  
 XX  
 PA (ALKU ) AKZO NOBEL NV.  
 XX  
 PI Mosselman S, Spek Van Der PJ;  
 XX WPI, 2001-476102/51.  
 DR N-PSDB; AAA42567.  
 XX  
 PT New DNA sequences, useful for coding or producing cystine knot  
 PT polypeptides, which are useful in preparing a pharmaceutical for  
 PT fertility-related disorders or contraception, and for controlling  
 PT follicular arrest and recruitment -  
 PT  
 PS Example 1: Page 23-24; 29pp; English.  
 XX  
 CC The present sequence represents a human cystine knot polypeptide. The  
 CC polypeptide is a follicular arrest and recruitment modulator. Cystine  
 CC knot polypeptides are useful in preparing a pharmaceutical for  
 CC fertility-related disorders or in contraception. The polypeptide is  
 CC particularly useful for controlling follicular arrest and recruitment.  
 CC Inhibition of recruitment can be used to delay (premature) menopause or  
 CC as a contraceptive. The polypeptide is also useful for in vitro  
 CC maturation and growth of follicles, e.g. from frozen ovarian tissue.  
 CC  
 SO Sequence 130 AA:  
 XX  
 XX  
 Query Match 100.0%; Score 722; DB 22; Length 130;  
 Best Local Similarity 100.0%; Pred. No. 9,1e-70;  
 Matches 130; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 MKLAFLFGPMALLLAGYGCVLGASSGNLRTFVGCAVREFTFLAKKPGCGRLRTTDC 60  
 DB 1 MKLAFLFGPMALLLAGYGCVLGASSGNLRTFVGCAVREFTFLAKKPGCGRLRTTDC 60  
 OY 61 WGRCEWKEKPILEPPYTEAHHRVCTYNETKQVTKLPNCAPGVDPFTYTPVAIRCDGAC 120  
 DB 61 WGRCEWKEKPILEPPYTEAHHRVCTYNETKQVTKLPNCAPGVDPFTYTPVAIRCDGAC 120  
 OY 121 STATTECETI 130  
 DB 121 STATTECETI 130  
 DE 17-SEP-2001 (first entry)  
 XX Human anterior pituitary hormone-related polypeptide.  
 DE Human; anterior pituitary hormone; hypertension; autoimmune disease;  
 KM heart failure.  
 XX Homo sapiens.  
 OS  
 PN WO200144475-A1.  
 XX  
 PD 21-JUN-2001.

```

PF 15-DEC-2000; 2000WO-JP08896.
XX
PR 17-DEC-1999; 99JP-0358707.
PR 18-FEB-2000; 2000JP-0046825.
XX
PA (TAKE ) TAKEDA CHEM IND LTD.
XX
PI Hinuma S, Fukusumi S, Fujii R, Hosoya M;
XX
DR WPI: 2001-408485/43.
DR N-PSDB; AAH45586.
XX
XX Polypeptides for treatment of hypertension, autoimmune disease and
PT heart failure -
XX
PS Claim 1; Fig 2; 107pp; Japanese.
XX
XX The invention relates to a novel polypeptide comprising a fully defined
CC 130 amino acid sequence given in the specification and its amides,
CC esters and salts. The polypeptide has anterior pituitary hormone-related
CC activity. It is useful for the treatment of hypertension, autoimmune
CC diseases and heart failure. The screening method and kit also
CC provided in the invention are useful for identifying new substances
CC for treating and preventing these diseases. The present sequence is
CC the polypeptide of the invention.
XX
SQ Sequence 130 AA;
Query Match 100.0%; Score 722; DB 22; Length 130;
Best Local Similarity 100.0%; Pred. No. 9.1e-70;
Matches 130; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 1 MKLAFLEGPMAILLAGYGVLAGSSGNLRFVGCAREFTFLAKKPGCRGLRTTDC 60
DB 1 MKLAFLEGPMAILLAGYGVLAGSSGNLRFVGCAREFTFLAKKPGCRGLRTTDC 60
OY 61 WGRCEWKEPILPEPYIEAHNRVCYNETKQVTVKLPNCAPGVDPFYTPVAIRDCGAC 120
DB 61 WGRCEWKEPILPEPYIEAHNRVCYNETKQVTVKLPNCAPGVDPFYTPVAIRDCGAC 120
OY 121 STATTCECTI 130
DB 121 STATTCECTI 130
DB 121 STATTCECTI 130
RESULT 4
AAB84998 standard; Protein; 230 AA.
XX
AC AAB84998;
XX
DT 06-AUG-2001 (first entry)
DE Human novel gonadotropin (NOVGON) protein.
XX
KW NOVG: transmembrane protein; NOVTRAN; neuromedin peptide; NOVNEUR;
KW gonadotropin-like protein; NOVGON; interleukin-1; NOVINTRA; human;
KW cytosolic; neuroprotective; reproductive; antiinflammatory; cancer;
KW antibacterial; cerebroprotective; antidiabetic; antiarthritic;
KW antiallergic; antiallergic.
XX
XX Homo sapiens.
XX
XX WO200140291-A2.
XX
XX 07-JUN-2001.
XX
XX 06-DEC-2000; 2000WO-US33029.
XX
XX 06-DEC-1999; 99US-0169056.
XX 09-DEC-1999; 99US-0169866.
XX 09-DEC-1999; 99US-0169866.
XX 10-DEC-1999; 99US-0170252.

```

```

PR 12-JAN-2000; 2000US-0175740.
PR 05-DEC-2000; 2000US-0170252.
XX
XX (CURA-) CURAGEN CORP.
XX
XX Burgess CE, Prayaga SK, Shimkets RA, Rastelli L, Zerhusen BD;
PI Mezes PS;
XX
DR WPI: 2001-374790/39.
DR N-PSDB; AAF83867.
XX
XX Novel isolated human transmembrane, neuromedin peptide
PT gonadotropin-like protein and interleukin-1 receptor antagonist
PT proteins, useful for treating cancer, immune response disorder,
PT metabolic function disorders -
XX
XX Claim 1; Fig 6B; 138pp; English.
XX
XX The invention provides novel polypeptides (NOVG) selected from human
CC transmembrane protein (NOVTRAN), neuromedin peptide (NOVNEUR),
CC gonadotropin-like protein (NOVGON) and two interleukin-1 receptor
CC antagonist proteins (NOVINTRA A and B). The invention also provides
CC methods in which a NOVG polypeptide, polynucleotide and antibody are
CC used in the detection, prevention and treatment of a broad range of
CC pathological states. NOVTRAN can be used to treat is a cell signaling
CC disorder such as cancer, immune response disorder, hematopoietic
CC disorder, neurodegenerative disorder. NOVNEUR can be used to treat
CC endocrine disorder, muscle disorder, neurologic disorder, cancers of
CC central nervous system, breast, colon, ovary, kidney, prostate and
CC thyroid. NOVGON can be used to treat reproductive development disorder,
CC metabolic function disorder and melanoma. NOVINTRA A and B can be used
CC to treat bone metabolism or structure disorder, inflammatory response
CC disorder, immune regulation disorder, septic shock, stroke, diabetes,
CC arthritis and cancer. The present sequence represents the NOVGON
CC polypeptide.
XX
SQ Sequence 230 AA;
Query Match 96.8%; Score 699; DB 22; Length 230;
Best Local Similarity 100.0%; Pred. No. 5.2e-67;
Matches 126; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 1 MKLAFLEGPMAILLAGYGVLAGSSGNLRFVGCAREFTFLAKKPGCRGLRTTDC 60
DB 1 MKLAFLEGPMAILLAGYGVLAGSSGNLRFVGCAREFTFLAKKPGCRGLRTTDC 60
OY 61 WGRCEWKEPILPEPYIEAHNRVCYNETKQVTVKLPNCAPGVDPFYTPVAIRDCGAC 120
DB 61 WGRCEWKEPILPEPYIEAHNRVCYNETKQVTVKLPNCAPGVDPFYTPVAIRDCGAC 120
OY 121 STATTCE 126
DB 121 STATTCE 126
RESULT 5
AAG64067
ID AAG64067 standard; Protein; 129 AA.
XX
AC AAG64067;
XX
XX 17-SEP-2001 (first entry)
XX
XX Rat anterior pituitary hormone-related polypeptide #1.
XX
XX Rat; anterior pituitary hormone; hypertension; autoimmune disease;
XX heart failure.
XX
XX Rattus sp.
XX
XX WO200144475-A1.
XX
XX 21-JUN-2001.

```



CC diseases and heart failure. The screening method and kit also  
CC provided in the invention are useful for identifying new substances  
CC for treating and preventing these diseases. The present sequence is  
CC is a polypeptide provided in the specification.

XX Sequence 106 AA;

Query Match 79.2%; Score 572; DB 22; Length 106;  
Best Local Similarity 92.5%; Pred. No. 9, 1e-54;  
Matches 98; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

QY 25 ASSGNLRTFVGC A V R E F T F L A K K P C R G L R I T T D A C M G R C E T W E K P I L E P P Y I E A N H R V C 84  
Db 1 S S S G N L H T F V G C A V R E F T F V A K K P C R G L R I T T D A C M G R C E T W E K P I L E P P Y I E A N H R V C 60

QY 85 T Y N E T K Q Y T V A L P N C A G V D P F T Y T P V A I R C D C A C S T A T T E C E T I 130  
Db 61 T Y N E T R R V T V T L P N C A G V D P F T Y T P V A V R C D C A C S T A T T E C E T I 106

RESULT 8

AAG63212 ID AAG63212 standard; Protein; 75 AA.

AC AAG63212;

DT 01-OCT-2001 (first entry)

DE Amino acid sequence of human cystine knot polypeptide splice variant.

XX Cystine knot polypeptide; follicular arrest; recruitment modulator;

KW fertility-related disorder; contraception; menopause; contraceptive;

KM follicle growth.

XX Homo sapiens.

PN MO200153346-A1.

PD 26-JUL-2001.

PF 17-JAN-2001; 2001WO-EP00570.

PR 18-JAN-2000; 2000EP-0200185.

PA (ALKU) AKZO NOBEL NV.

PI Mosselman S, Spek Van Der PJ;

XX WPI; 2001-476102/51.

DR N-PSDB; AAH42568.

XX New DNA sequences, useful for coding or producing cystine knot

PT polypeptides, which are useful in preparing a pharmaceutical for

PT fertility-related disorders or contraception, and for controlling

PT follicular arrest and recruitment -

XX Example 1; Page 25; 29pp; English.

XX The present sequence represents a human cystine knot polypeptide splice

CC variant. The polypeptide is a follicular arrest and recruitment

CC modulator. Cystine knot polypeptides are useful in preparing a

CC pharmaceutical for fertility-related disorders or in contraception.

CC The polypeptide is particularly useful for controlling follicular

CC arrest and recruitment. Inhibition of recruitment can be used to delay

CC (premature) menopause or as a contraceptive. The polypeptide is also

CC useful for in vitro maturation and growth of follicles, e.g. from

CC frozen ovarian tissue.

XX Sequence 75 AA;

QY Query Match 51.2%; Score 370; DB 22; Length 75;

Best Local Similarity 100.0%; Pred. No. 3e-32;

Matches 68; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKLAF LFGPMALLLAGYGVGASGNLRFTVGC A V R E F T F L A K K P C R G L R I T T D A C 60  
Db 1 MKLAF LFGPMALLLAGYGVGASGNLRFTVGC A V R E F T F L A K K P C R G L R I T T D A C 60

QY 61 WGRCE TWE 68  
Db 61 WGRCE TWE 68

RESULT 9

AAB71792 ID AAB71792 standard; protein; 141 AA.

AC AAB71792;

DT 02-MAY-2001 (first entry)

DE Bovine lutropin beta-chain precursor.

XX Bovine; lutropin; beta-human chorionic gonadotropin; beta-hCG; anti-HIV;

KW cyostatic; antianaemic; vascular; osteopathic; antinflammatory;

KW gene therapy; maternin; MA peptide; pMA peptide;

KW human immunodeficiency virus; HIV; cancer; wasting disorder;

XX haematopoietic disorder; inflammation; angiogenic disorder.

OS Bos sp.

PN WO200110907-A2.

PD 15-FEB-2001.

PF 05-AUG-2000; 2000WO-US21495.

PR 06-AUG-1999; 99US-0147825.

PR 13-MAR-2000; 2000US-0188777.

PA (UYMA-) UNIV MARYLAND BIOTECHNOLOGY INST.

PI Gallo R, Bryant J, Lunardi-Iskandar Y, Powell R, Reltz M;

XX Foulke J, Lewis G;

DR WPI; 2001-147510/15.

XX Cells that produce therapeutic beta-human chorionic gonadotropin

PT fragments, useful for the treatment of human immunodeficiency virus

PT infections, cancers, wasting disorders, hematopoietic disorders,

PT inflammation and angiogenic disorders -

XX Disclosure; Page 26; 185pp; English.

XX The present sequence is given in a specification relating to

CC therapeutic polypeptides originally isolated from human early pregnancy

CC urine, now synthetically produced, as well as functional equivalents of

CC these polypeptides. Novel beta-human chorionic gonadotropin (hCG)

CC fragments, designated Maternin (RTM) and referred to as MA and pMA

CC peptides, are disclosed. Both native and synthetic MA inhibited growth

CC of human tumor cells implanted into immuno-deficient mice by between 60

CC to 100%, relative to control studies. The therapeutic MA polypeptides

CC may be used for the prevention and treatment of a range of diseases and

CC disorders, including human immunodeficiency virus (HIV) infections,

CC cancers (especially Kaposi's sarcoma), wasting disorders, hematopoietic

CC disorders (e.g. anaemias, radiation mediated bone marrow damage and

CC trauma related blood loss), inflammation and angiogenic disorders.

XX Sequence 141 AA;

QY Query Match 29.1%; Score 210; DB 22; Length 141;

Best Local Similarity 38.4%; Pred. No. 9.2e-15;

Matches 48; Conservative 21; Mismatches 46; Indels 10; Gaps 5;

QY 6 LFLGPMALLLAGYGVGASGNLRFTVGC A V R E F T F L A K K P C R G L R I T T D A C M G R C 64

```

Db      3 MEOGLIMLLGVAG--VMASRGPLRL--COPINATLAEKACPVCTFTTSTICAGYC 58
OY      65 ETWER--PILEPPYIEAHHRVCTYNETKQVTKLPNCAPGVDPFYTYVPAIRCDGACST 122
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      59 PSKRVLPVLPMPQ---RVCTYHELRFASVRLPGCPGVDPMVSPFVALSCHGCRLL 115
OY      123 ATTEEC 127
      : : : : :
Db      116 SSTDC 120

RESULT 10
AAB71789
ID AAB71789 standard; protein; 141 AA.
AC AAB71789;
XX
XX
DT 02-MAY-2001 (first entry)
DE
XX Sheep lutropin beta-chain precursor.
XX
XX Sheep; lutropin; beta-human chorionic gonadotropin; beta-hCG; anti-HIV;
XX cytostatic; antianaemic; vascular; osteopathic; antiinflammatory;
XX gene therapy; maternin; MA peptide; pMA peptide;
XX human immunodeficiency virus; HIV; cancer; wasting disorder;
XX haematopoietic disorder; inflammation; angiogenic disorder.
XX
XX Ovis ammon aries.
XX
XX MO200110907-A2.
XX
XX 15-FEB-2001.
XX
XX 05-AUG-2000; 2000MO-US21495.
XX
XX 06-AUG-1999; 99US-0147825.
XX 13-MAR-2000; 2000US-0188777.
XX
XX (UYMA-) UNIV MARYLAND BIOTECHNOLOGY INST.
XX
XX PA Gallo R, Bryant J, Lunardi-Iskandar Y, Powell R, Reitz M;
XX PI Foulke J, Lewis G;
XX
XX WPI; 2001-147510/15.
XX
XX Cells that produce therapeutic beta-human chorionic gonadotropin
XX fragments, useful for the treatment of human immunodeficiency virus
XX infections, cancers, wasting disorders, hematopoietic disorders,
XX inflammation and angiogenic disorders.
XX
XX Disclosure; Page 26; 185pp; English.
XX
XX The present sequence is given in a specification relating to
XX therapeutic polypeptides originally isolated from human early pregnancy
XX urine, now synthetically produced, as well as functional equivalents of
XX these polypeptides. Novel beta-human chorionic gonadotropin (hCG)
XX fragments, designated Materin (RTM) and referred to as MA and pMA
XX peptides, are disclosed. Both native and synthetic MA inhibited growth
XX of human tumour cells implanted into immuno-deficient mice by between 60
XX to 100%, relative to control studies. The therapeutic MA polypeptides
XX may be used for the prevention and treatment of a range of diseases and
XX disorders, including human immunodeficiency virus (HIV) infections,
XX cancers (especially Kaposi's sarcoma), wasting disorders, haematopoietic
XX disorders (e.g. anaemias, radiation mediated bone marrow damage and
XX trauma related blood loss), inflammation and angiogenic disorders.
XX
XX Sequence 141 AA:

Query Match 27.9%; Score 201.5; DB 22; Length 141;
Best Local Similarity 39.2%; Pred. No. 7.5e-14;
Matches 47; Conservative 19; Mismatches 45; Indels 9; Gaps 5;
OY 11 MAILLAGYGVGASSGNLRTFVGCAVREFTPLAKKPGCR-GLRITTTDCAWGRCEFTWEK 69

```

```

Db      7 LLLMGLLVGAGV--WASRGPLRL--COPINATLAEKACPVCTFTTSTICAGYCLSMQ 63
OY      70 --PILEPPYIEAHHRVCTYNETKQVTKLPNCAPGVDPFYTYVPAIRCDGACSTATTEC 127
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      64 VLPVILPMPQ---RVCTYHELRFASVRLPGCPGVDPMVSPFVALSCHGCRLLSSTDC 120

RESULT 11
AAP94151
ID AAP94151 standard; protein; 142 AA.
AC AAP94151;
XX
XX 11-JUN-1989 (first entry)
DE
XX Fish gonadotropin (GTH) polypeptide sequence.
XX
XX Fish gonadotropin (GTH); salmon; fish gonad enlargement.
XX
XX salmon.
XX
XX Key Location/Qualifiers
XX CDS 1..426
XX
XX JP63304997-A.
XX
XX 13-DEC-1988.
XX
XX 08-JUN-1987; 87JP-0142891.
XX
XX 08-JUN-1987; 87JP-0142891.
XX
XX (KYOW ) KYOWA HAKKO KOGYO KK.
XX
XX WPI; 1989-029588/04.
XX N-PSDB; AAN91176.
XX
XX Fish gonadotropin gene of specified peptide sequence - obtd. by prepn. of
XX complete RNA from white salmon pituitary gland, passing through cellulose
XX column etc.
XX
XX Disclosure; Page 8; 10pp; Japanese.
XX
XX PS This method of production of fish gonadotropin (GTH) utilizes recombinant
XX CC DNA/RNA techniques. RNA isolated from white salmon pituitary glands is
XX CC used as a template for DNA synthesis by way of reverse transcriptase (RT)
XX CC The DNA (ds) is inserted into a vector and eg E.coli are transformed
XX CC The GTH product is thus inexpensively mass produced and can be used in
XX CC fish gonad enlargement.
XX
XX Sequence 142 AA:

Query Match 27.8%; Score 201; DB 10; Length 142;
Best Local Similarity 34.7%; Pred. No. 8.5e-14;
Matches 42; Conservative 19; Mismatches 44; Indels 16; Gaps 3;
OY 22 VLGASSGNLRTFVGCAVRE-----FTPLAKKPGC-RGLRITTTDCAWGRCEFT 66
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1 MGLGHVGTLLSLPLCLILEPEBSLWQPCOPINQVTSLEKEGCPGLVIGTPICSGHCV 60
OY 67 WEKPILEPPYIEAHHRVCTYNETKQVTKLPNCAPGVDPFYTYVPAIRCDGACSTATTE 126
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 61 -KEPVFSPSTVYQHVCTYRDVRETIIRLPDCPPWVDPIVTFVVALSCDCSLCNDTSD 119
OY 127 C 127
      :
Db 120 C 120

RESULT 12
AAR15106
ID AAR15106 standard; protein; 145 AA.

```

```

XX AC AAR15106;
XX XX
XX DT 11-FEB-1992 (first entry)
XX DE hCG/bLH chimera, D10.
XX XX
XX KM Glycoprotein hormone; immuno-castration;
XX KM immuno-contragestive; vaccine; human chorionic gonadotropin;
XX KM luteinising hormone; LH; CG; bovine.
XX OS Homo sapiens.
XX XX Bos taurus.
XX PN KO9116922-A.
XX PD 14-NOV-1991.
XX PF 07-MAY-1991; 91WO-US03162.
XX PR 08-MAY-1990; 90US-0520703.
XX PA (UYNE-) UNIV MED NEW JERSEY.
XX PI Campbell RK, Moyle WR;
XX DR WPI; 1991-353528/48.
XX XX
XX PT New glyco-protein hormone analogues - for inducing fertility as
XX PT immuno-castration agents, for suppressing reproductive system
XX PT development and as immuno-contragestive vaccines.
XX PS Table IV; Page 63; 94pp; English.
XX CC The sequence is an analogue of mature hCG beta subunit having
XX CC several residues replaced by the corresponding residues in the
XX CC bovine LH protein. The chimeric hormone may be useful for identify-
XX CC ing residues which are important for binding to the human receptor
XX CC and may also have applications as an immunogen, agonist and/or
XX CC antagonist.
XX CC See AAR15043, AAR15061-R15125 and AAR15161-R15198.
XX SQ Sequence 145 AA;

Query Match 27.3%; Score 197; DB 12; Length 145;
Best Local Similarity 39.0%; Pred. No. 2.4e-13;
Matches 41; Conservative 18; Mismatches 38; Indels 8; Gaps 4;

OY 26 SSGNLRRTFGCAVREFFFLAKKPGCR-GLRITTDACWGRCETWEK--PILPEPYIEAHNR 82
DB 1 SRGPIRLPL--COPINATILAEKEACPCVITFTTSTICAGTCPSMKRVLLPMPQ---R 55
OY 83 VCTYNETKQVTVKLPNCAPGVDPFYTPVAIRCDGACSTATTEC 127
DB 56 VCTYHELRFASVRLPGCPGVDPVMSFPVALSCHGCPRLSLSTDC 100

RESULT 13
AAM47027
ID AAM47027 standard; protein; 131 AA.
XX AC AAM47027;
XX DT 11-MAY-1998 (first entry)
XX DE eCG hormone beta-subunit variant (1-131 amino acid residues).
XX KM Equine; chorionic gonadotropin; hormone; eCG; beta-subunit; treatment;
XX KM follicle-stimulating hormone; FSH; luteinising hormone; LH; ovulation;
XX KM ovarian disease; variant.
XX OS Family Equidae.
XX OS Synthetic.

```

```

XX XX
XX FH Key Location/Qualifiers
XX FT Peptide 1..20
XX FT Protein /note= "signal peptide"
XX FT Protein 21..131
XX FT Protein /note= "mature protein"
XX PN JP10036399-A.
XX PD 10-FEB-1998.
XX XX
XX XX 24-JUL-1996; 96JP-0212197.
XX PE 24-JUL-1996; 96JP-0212197.
XX PR 24-JUL-1996; 96JP-0212197.
XX PA (ELED ) DENKI KAGAKU KOGYO KK.
XX DR WPI; 1998-174916/16.
XX XX
XX PT Recombinant truncated equine chorionic gonadotropin hormone - has
XX PT enhanced follicle stimulating hormone activity and reduced
XX PT luteinising hormone activity; useful as ovulation inducer
XX PS Claim 7; Page -: 16pp; Japanese.
XX CC This is a variant of the beta-subunit of an equine chorionic gonadotropin
XX CC (eCG) hormone. The variants are created by removing 39 or lesser amino
XX CC acid residues from the C-terminal peptide region of the beta-subunit. The
XX CC recombinant eCG hormone is composed of alpha-subunit and the variant
XX CC beta-subunits of eCG hormone and has a substantially enhanced follicle-
XX CC stimulating hormone (FSH) activity and reduced luteinising hormone (LH)
XX CC activity. The hormone is an ovulation inducer and can be used as an
XX CC agent for the treatment of ovarian diseases.
XX CC Note: This sequence does not appear in the specification. It has been
XX CC created by modifying the eCG beta-subunit sequence provided in page 11.
XX SQ Sequence 131 AA;

Query Match 25.4%; Score 183.5; DB 19; Length 131;
Best Local Similarity 35.5%; Pred. No. 5.9e-12;
Matches 44; Conservative 15; Mismatches 48; Indels 17; Gaps 5;

OY 11 MALLIAGYGVLYGASSGNLRTFGCAVREFFFLAKKPGCR-GLRITTDACWGRCETWEK 69
DB 7 LILMMLISVGGV-WASRGPIRLPL--CRPINATILAEKEACPCVITFTTSTICAGTCPSMYR 63
OY 70 -----PILPEPYIEAHNRCTYNETKQVTVKLPNCAPGVDPFYTPVAIRCDGACSTA 123
DB 64 VMPALPLAIPGP-----VCTYRELRFASIRLPGCPGVDPVMSFPVALSCHGCPQCIK 116
OY 124 TTEC 127
DB 117 TTDG 120

RESULT 14
AAM47025
ID AAM47025 standard; protein; 134 AA.
XX AC AAM47025;
XX DT 11-MAY-1998 (first entry)
XX DE eCG hormone beta-subunit variant (1-134 amino acid residues).
XX KM Equine; chorionic gonadotropin; hormone; eCG; beta-subunit; treatment;
XX KM follicle-stimulating hormone; FSH; luteinising hormone; LH; ovulation;
XX KM ovarian disease; variant.
XX OS Family Equidae.
XX OS Synthetic.
XX FH Key Location/Qualifiers

```

```

FT Peptide 1..20
FT /note= "signal peptide"
FT Protein 21..134
FT /note= "mature protein"
PN JP10036399-A.
XX
XX 10-FEB-1998.
XX
XX 24-JUL-1996; 96JP-0212197.
XX
XX 24-JUL-1996; 96JP-0212197.
XX
XX (ELED ) DENKI KAGAKU KOGYO KK.
XX
XX WPI; 1998-174916/16.
DR
XX
XX PT Recombinant truncated equine chorionic gonadotropin hormone - has
XX enhanced follicle-stimulating hormone activity and reduced
XX luteinising hormone activity; useful as ovulation inducer
XX
XX PS Claim 6; Page -: 16pp; Japanese.
XX
XX CC This is a variant of the beta-subunit of an equine chorionic gonadotropin
XX (ECG) hormone. The variants are created by removing 39 or lesser amino
XX acid residues from the C-terminal peptide region of the beta-subunit. The
XX recombinant ECG hormone is composed of alpha-subunit and the variant
XX beta-subunits of ECG hormone and has a substantially enhanced follicle-
XX stimulating hormone (FSH) activity and reduced luteinising hormone (LH)
XX activity. The hormone is an ovulation inducer and can be used as an
XX agent for the treatment of ovarian diseases.
XX Note: This sequence does not appear in the specification. It has been
XX created by modifying the ECG beta-subunit sequence provided in Page 11.
SQ Sequence 134 AA.

Query Match 25.4%; Score 183.5; DB 19; Length 134;
Best Local Similarity 35.5%; Pred. No. 6e-12;
Matches 44; Conservative 15; Mismatches 48; Indels 17; Gaps 5;

QY 11 MALLLAGYGVGASSGNLRFVGCAREFTFLAKKPGCR-GLRTITPDACMGRCETWEK 69
DB 7 LLLMLLSVGV-WASRGPLRL--CRPINATLAERKACPCITFTTSICAGYCSWVR 63
QY 70 -----PLEPPYIEAHHRVCTYNETKQYTVKLPNCAPGVDPFYTYPAIRCDGACSTA 123
DB 64 VMPAALPAIPQP-----VCTYRELRFASIRLPGCPGVDPVSPVALSCHGCPQIQR 116
QY 124 TTEC 127
DB 117 TTDC 120

RESULT 15
AAW47026
ID AAW47026 standard; protein; 137 AA.
XX
XX AAW47026;
AC
XX
XX 11-MAY-1998 (first entry)
DT
XX
XX ECG hormone beta-subunit variant (1-137 amino acid residues).
DE
XX
XX Equine; chorionic gonadotropin; hormone; ECG; beta-subunit; treatment;
KW follicle-stimulating hormone; FSH; luteinising hormone; LH; ovulation;
KM ovarian disease; variant.
XX
XX Family Equidae.
OS Synthetic.
OS
XX
XX Key Location/Qualifiers
FH Peptide 1..20 /note= "signal peptide"
FT

```

```

FT Protein 21..137
FT /note= "mature protein"
PN JP10036399-A.
XX
XX 10-FEB-1998.
XX
XX 24-JUL-1996; 96JP-0212197.
XX
XX 24-JUL-1996; 96JP-0212197.
XX
XX (ELED ) DENKI KAGAKU KOGYO KK.
XX
XX WPI; 1998-174916/16.
DR
XX
XX PT Recombinant truncated equine chorionic gonadotropin hormone - has
XX enhanced follicle-stimulating hormone activity and reduced
XX luteinising hormone activity; useful as ovulation inducer
XX
XX PS Claim 8; Page -: 16pp; Japanese.
XX
XX CC This is a variant of the beta-subunit of an equine chorionic gonadotropin
XX (ECG) hormone. The variants are created by removing 39 or lesser amino
XX acid residues from the C-terminal peptide region of the beta-subunit. The
XX recombinant ECG hormone is composed of alpha-subunit and the variant
XX beta-subunits of ECG hormone and has a substantially enhanced follicle-
XX stimulating hormone (FSH) activity and reduced luteinising hormone (LH)
XX activity. The hormone is an ovulation inducer and can be used as an
XX agent for the treatment of ovarian diseases.
XX Note: This sequence does not appear in the specification. It has been
XX created by modifying the ECG beta-subunit sequence provided in Page 11.
SQ Sequence 137 AA.

Query Match 25.4%; Score 183.5; DB 19; Length 137;
Best Local Similarity 35.5%; Pred. No. 6.2e-12;
Matches 44; Conservative 15; Mismatches 48; Indels 17; Gaps 5;

QY 11 MALLLAGYGVGASSGNLRFVGCAREFTFLAKKPGCR-GLRTITPDACMGRCETWEK 69
DB 7 LLLMLLSVGV-WASRGPLRL--CRPINATLAERKACPCITFTTSICAGYCSWVR 63
QY 70 -----PLEPPYIEAHHRVCTYNETKQYTVKLPNCAPGVDPFYTYPAIRCDGACSTA 123
DB 64 VMPAALPAIPQP-----VCTYRELRFASIRLPGCPGVDPVSPVALSCHGCPQIQR 116
QY 124 TTEC 127
DB 117 TTDC 120

Search completed: October 11, 2002, 08:22:44
Job time : 33 secs

```